

N+ doped region formed in other surface of the device and in the N- doped layer, said N+ region laterally spaced from the P+ doped region and the P-doped well,

said P - doped well and P+ doped region layers having a combined thickness of about $5\mu\text{m}$ to about $12\mu\text{m}$; and

recombination centers comprising noble metal impurities disposed substantially in said N - doped layer and P - doped well layers.

2.(amended) The device of claim 1 wherein said P - doped well layer has a thickness of about $4\mu\text{m}$ to about $10\mu\text{m}$.

3. (amended) The device of claim 1 wherein said P+ doped region layer has a thickness of about $0.1\mu\text{m}$ to about $2\mu\text{m}$.

4. (amended) The device of claim 1 wherein said P - doped well layer has a dopant level of at least 10^{16} atoms/cm³.

5. (amended) The device of claim 4 wherein said P - doped well layer has a dopant level of about 2.5×10^{17} atoms/cm³.

6. (amended) The device of claim 1 wherein said P+ doped region layer has a dopant level of at least 10^{18} atoms/cm³.

7. (amended) The device of claim 6 wherein said P+ doped region layer has a dopant level of about 6×10^{19} atoms/cm³.

8. (original) The device of claim 1 wherein said N - doped layer has a dopant level of about 10^{14} atoms/cm³ to about 10^{15} atoms/cm³.

9. Cancelled.

10.(original) The device of claim 1 wherein said noble metal impurities are selected from the group consisting of gold, platinum, and palladium.

11.(original) The device of claim 10 wherein said noble metal impurities comprise platinum.

12. (amended) The device of claim 11 wherein said recombination centers are formed by platinum diffusion through said N + doped substrate into said N - doped and P - doped well layers.

13.(original) The device of claim 11 containing platinum impurities at a concentration of about 1×10^{15} to about 1×10^{16} atoms/cm³.

14.(original) The device of claim 13 wherein said concentration of platinum impurities is about 2×10^{15} atoms/cm³.

15.(original) The device of claim 1 further comprising an N + doped region disposed in said N - doped layer.

16. Cancelled.

17.(amended) The device of claim 16 comprising a diode, MOSFET or an IGBT power device.